SEQUENCE LISTING

<110> Acton, Susan L.
      Ordovas, Jose M.
      McCarthy, Jeanette J.

<120> DIAGNOSTIC ASSAYS AND KITS FOR BODY MASS AND
      CARDIOVASCULAR DISORDERS

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<140> 09/031,626
<141> 1998-02-27

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Met Gly Cys Ser Ala Lys Ala Arg Trp Ala Ala Gly Ala Leu Gly Val
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Ala Gly Leu Leu Cys Ala Val Leu Gly Ala Val Met Ile Val Met Val
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Ser Glu Ser Asp Tyr Ile Val Met Pro Asn Ile Leu Val Leu Gly Ala
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ttg gca ttc acc acc ctc ggc gaa cgt gcc ttc atg aac cgc act gtg      646
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ggt gag atc atg tgg ggc tac aag gac ccc ctt gtg aat ctc atc aac      694
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Val Gln Asn Ile Ser Arg Ile His Leu Val Asp Lys Trp Asn Gly Leu
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agc aag gtt gac ttc tgg cat tcc gat cag tgc aac atg atc aat gga      886
Ser Lys Val Asp Phe Trp His Ser Asp Gln Cys Asn Met Ile Asn Gly
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agt gcc ccc ttg ttt ctc tcc cat cct cac ttc ctc aac gcc gac ccg    1174
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gtt ctg gca gaa gcg gtg act ggc ctg cac cct aac cag gag gca cac    1222
Val Leu Ala Glu Ala Val Thr Gly Leu His Pro Asn Gln Glu Ala His
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tcc ttg ttc ctg gac atc cac ccg gtc acg gga atc ccc atg aac tgc    1270
Ser Leu Phe Leu Asp Ile His Pro Val Thr Gly Ile Pro Met Asn Cys
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Gly Gln Thr Gly Lys Ile Glu Pro Val Val Leu Pro Leu Leu Trp Phe
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gca gag agc ggg gcc atg gag ggg gag act ctt cac aca ttc tac act    1414
Ala Glu Ser Gly Ala Met Glu Gly Glu Thr Leu His Thr Phe Tyr Thr
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ctg gcg ctg ggc tgc gtc ctg ctg ctg gtc cct gtc atc tgc caa atc    1510
Leu Ala Leu Gly Cys Val Leu Leu Leu Val Pro Val Ile Cys Gln Ile
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cgg agc caa gag aaa tgc tat tta ttt tgg agt agt agt aaa aag ggc    1558
Arg Ser Gln Glu Lys Cys Tyr Leu Phe Trp Ser Ser Ser Lys Lys Gly
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Ser Lys Asp Lys Glu Ala Ile Gln Ala Tyr Ser Glu Ser Leu Met Thr
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tca gct ccc aag ggc tct gtg ctg cag gaa gca aaa ctg tagggtcctg    1655
Ser Ala Pro Lys Gly Ser Val Leu Gln Glu Ala Lys Leu
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Ser Ser Leu Ser Phe Asn Met Trp Lys Glu Ile Pro Ile Pro Phe Tyr
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Leu Ser Val Tyr Phe Phe Asp Val Met Asn Pro Ser Glu Ile Leu Lys
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Gly Glu Lys Pro Gln Val Arg Glu Arg Gly Pro Tyr Val Tyr Arg Glu
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Phe Arg His Lys Ser Asn Ile Thr Phe Asn Asn Asn Asp Thr Val Ser
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Phe Leu Glu Tyr Arg Thr Phe Gln Phe Gln Pro Ser Lys Ser His Gly
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Gly Glu Ile Met Trp Gly Tyr Lys Asp Pro Leu Val Asn Leu Ile Asn
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Lys Tyr Phe Pro Gly Met Phe Pro Phe Lys Asp Lys Phe Gly Leu Phe
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Ser Lys Val Asp Phe Trp His Ser Asp Gln Cys Asn Met Ile Asn Gly
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Cys Pro Cys Leu Glu Ser Gly Ile Gln Asn Val Ser Thr Cys Arg Phe
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Val Leu Ala Glu Ala Val Thr Gly Leu His Pro Asn Gln Glu Ala His
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Ser Val Lys Leu Gln Leu Ser Leu Tyr Met Lys Ser Val Ala Gly Ile
385   390   395   400

Gly Gln Thr Gly Lys Ile Glu Pro Val Val Leu Pro Leu Leu Trp Phe
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Ala Glu Ser Gly Ala Met Glu Gly Glu Thr Leu His Thr Phe Tyr Thr
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Gln Leu Val Leu Met Pro Lys Val Met His Tyr Ala Gln Tyr Val Leu
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Leu Ala Leu Gly Cys Val Leu Leu Leu Val Pro Val Ile Cys Gln Ile
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Arg Ser Gln Glu Lys Cys Tyr Leu Phe Trp Ser Ser Ser Lys Lys Gly
465             470             475                 480

Ser Lys Asp Lys Glu Ala Ile Gln Ala Tyr Ser Glu Ser Leu Met Thr
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cctgagcccc gcgagcccgg gccgcacacg cggac atg ggc ggc agc gcc agg     173
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gcg cgc tgg gtg gcg gtg ggg ctg ggc gtc gtg ggg ctg ctg tgc gct 221
Ala Arg Trp Val Ala Val Gly Leu Gly Val Val Gly Leu Leu Cys Ala
            10              15                  20

gtg ctc ggt gtg gtt atg atc ctc gtg atg ccc tcg ctc atc aaa cag 269
Val Leu Gly Val Val Met Ile Leu Val Met Pro Ser Leu Ile Lys Gln
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cag gta ctg aag aat gtc cgc ata gac ccc agc agc ctg tcc ttt gca 317
Gln Val Leu Lys Asn Val Arg Ile Asp Pro Ser Ser Leu Ser Phe Ala
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atg tgg aag gag atc cct gta ccc ttc tac ttg tcc gtc tac ttc ttc 365
Met Trp Lys Glu Ile Pro Val Pro Phe Tyr Leu Ser Val Tyr Phe Phe
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gag gtg gtc aat ccc agc gag atc cta aag ggt gag aag cca gta gtg 413
Glu Val Val Asn Pro Ser Glu Ile Leu Lys Gly Glu Lys Pro Val Val
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cgg gag cgt gga ccc tat gtc tac agg gaa ttc aga cat aag gcc aac 461
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ctc cat ttc cag ccg gac agg tcc cac ggc tct gag agt gac tac att      557
Leu His Phe Gln Pro Asp Arg Ser His Gly Ser Glu Ser Asp Tyr Ile
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ata ctg cct aac att ctg gtc ttg ggg ggc gca gta atg atg gag agc      605
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aag tct gca ggc ctg aag ctg atg atg acc ttg ggg ctg gcc acc ttg      653
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Gly Gln Arg Ala Phe Met Asn Arg Thr Val Gly Glu Ile Leu Trp Gly
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tat gag gat ccc ttc gtg aat ttt atc aac aaa tac tta cca gac atg      749
Tyr Glu Asp Pro Phe Val Asn Phe Ile Asn Lys Tyr Leu Pro Asp Met
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ttc ccc atc aag ggc aag ttc ggc ctg ttt gtt gag atg aac aac tca      797
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Asp Ser Gly Leu Phe Thr Val Phe Thr Gly Val Gln Asn Phe Ser Lys
215                 220                 225                 230

atc cac ctg gtg gac aga tgg aat ggg ctc agc aag gtc aac tac tgg      893
Ile His Leu Val Asp Arg Trp Asn Gly Leu Ser Lys Val Asn Tyr Trp
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cat tca gag cag tgc aac atg atc aat ggc act tcc ggg cag atg tgg      941
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gca cca ttc atg aca ccc cag tcc tcg ctg gaa ttc ttc agt ccg gaa      989
Ala Pro Phe Met Thr Pro Gln Ser Ser Leu Glu Phe Phe Ser Pro Glu
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gcc tgc agg tct atg aag ctc acc tac cat gat tca ggg gtg ttt gaa     1037
Ala Cys Arg Ser Met Lys Leu Thr Tyr His Asp Ser Gly Val Phe Glu
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ggc atc ccc acc tat cgc ttc aca gcc cct aaa act ttg ttt gcc aat     1085
Gly Ile Pro Thr Tyr Arg Phe Thr Ala Pro Lys Thr Leu Phe Ala Asn
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ggg tct gtt tac cca ccc aat gaa ggt ttc tgc ccg tgc ctt gaa tcc     1133
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tca cac cct cac ttc tac aat gca gac cct gtg cta tca gaa gcc gtt   1229
Ser His Pro His Phe Tyr Asn Ala Asp Pro Val Leu Ser Glu Ala Val
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Leu Gly Leu Asn Pro Asp Pro Arg Glu His Ser Leu Phe Leu Asp Ile
            360             365             370

cat ccg gtc act ggg atc ccc atg aac tgt tct gtg aag ttg cag ata   1325
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375             380             385             390

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Val Leu Gln Glu Ala Lys Leu
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Gly Glu Lys Pro Val Val Arg Glu Arg Gly Pro Tyr Val Tyr Arg Glu
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Val Gln Asn Phe Ser Lys Ile His Leu Val Asp Arg Trp Asn Gly Leu
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Ser Lys Val Asn Tyr Trp His Ser Glu Gln Cys Asn Met Ile Asn Gly
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Val Leu Ser Glu Ala Val Leu Gly Leu Asn Pro Asp Pro Arg Glu His
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Ser Leu Phe Leu Asp Ile His Pro Val Thr Gly Ile Pro Met Asn Cys
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Ser Val Lys Leu Gln Ile Ser Leu Tyr Ile Lys Ala Val Lys Gly Ile
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Gly Gln Thr Gly Lys Ile Glu Pro Val Val Leu Pro Leu Leu Trp Phe
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Gln Leu Val Leu Met Pro Gln Val Leu Gln Tyr Val Gln Tyr Val Leu
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Leu Gly Leu Gly Gly Leu Leu Leu Leu Val Pro Val Ile Tyr Gln Leu
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Arg Ser Gln Glu Lys Cys Phe Leu Phe Trp Ser Gly Ser Lys Lys Gly
465                     470                     475                     480

Ser Gln Asp Lys Glu Ala Ile Gln Ala Tyr Ser Glu Ser Leu Met Ser
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tttgacgtca tgaaccccag cgagatcctg aagggcgaga agccgcaggt gcgggagcgc 300

gggccctacg tgtacaggtg aggctgtgtc cacgtgatgg tggacgggcc ggctgacgct 360

gggcatggga cgggtctcaa gtggacggga tggggaggct gctgactgac ccccaaacat 420

tgttccggaa gcacgcaact catagtcggg gtaagtgcta ctcccaaaaa agtttgcgt 479


<210> 7
<211> 495
<212> DNA
<213> Human

<400> 7
catgtcctgc agtgggcagg cagcgggagg gacagacttg gcgaaggggc cgagctcagc 60
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tttggctgtg gggccggagg tgtgcacaga cgtccagggc ccctggttcc caggcaggca 120

ttgcaggcga gtagaaggga aacgtcccat gcagcggggc ggggcgtctg acccactggc 180

ttcccccaca gggagttcag gcacaaaagc aacatcacct tcaacaacaa cgacaccgtg 240

tccttcctcg agtaccgcac cttccagttc cagccctcca agtcccacgg ctcggagagc 300

gactacatcg tcatgcccaa catcctggtc ttggtgaggc tgccctgtgg cccacgccgc 360

ctcgcaccct gacctcgtcc cctgtctctc ctcccgcctg ccccttgtgc agagagcagt 420

ccctgaggtg gtcggagcgt ggggactcac gcctggtggg tggctttcgg ccctgtgctg 480

tctccaccac cccca 495


<210> 8
<211> 526
<212> DNA
<213> Human

<400> 8
ggtggttctg gtgtcccaga tgccccacgt ggccactcca ggggcctcct gcaccccagc 60

atttcccttc atgggctctt tgctgtgagg cccagctggg gccaagggag gatgggccag 120

ccacgtccag cctctgacac tagtgtccct tcgccttgca gggtgcggcg gtgatgatgg 180

agaataagcc catgaccctg aagctcatca tgaccttggc attcaccacc ctcggcgaac 240

gtgccttcat gaaccgcact gtgggtgaga tcatgtgggg ctacaaggac cccttgtgaa 300

tctcatcaac aagtactttc caggcatgtt ccccttcaag acaagttcg gattatttgc 360

tgaggtacgt gtggcctggt gagaagccaa agattcaggc ctgtgtcctg tcttcccctc 420

acacagcctg gacactggtc accagcttgc tttgtagctg gctggggatc tagtggctgt 480

gggttgtaag tgactgagaa cctgactcaa accggcttga gtgaaa 526


<210> 9
<211> 416
<212> DNA
<213> Human

<400> 9
cctctcggtc cccagacact gggcatttgg cagtgaacca gatgctgggg gccctgtcct 60

tctggtggag ggggaggagg gctcagccca gaatgttcag accaggccgg ctcaatggca 120

ggcctaagcc ttacgatgct gttccctgct gtgtctgtag ctcaacaact ccgactctgg 180

gctcttcacg gtgttcacgg gggtccagaa catcagcagg atccacctcg tggacaagtg 240

gaacgggctg agcaaggtga ggggcgagag gcgagggccc ctgtcgccag ggagagggga 300
```

gggtgggccc ggccatggct gctcgggagt ggcagggacc agagagctcc ttcttccttt 360

gtcgtgaaga gggtgctggg aggatgaaca ctcttgaagt tggaggaggg atttta   416

<210> 10
<211> 436
<212> DNA
<213> Human

<400> 10
tctctgtgtg tctacatagc ctgccctctt cccaccgtgc cagtattggg aattgagtgg 60

ccgtgcgtgc accagggtga gttaggtgtg cagcacctga gagggcttat taaggggcct 120

tggccctact gaggggtcta gtctggatgc ttcccccccag gttgacttct ggcattccga 180

tcagtgcaac atgatcaatg gaacttctgg gcaaatgtgg ccgcccttca tgactcctga 240

gtcctcgctg gagttctaca gcccggaggc ctgccggtaa tcactgggac tcggggcctc 300

ctgggtttcc tgggtagctc atggccaaat tctgtggtgt tggctgtgca cttggaaagc 360

attttgactc atcgtggatt tgactcagta gcccttggca ccagcttgaa ttctctttgg 420

tcacaccacc aaaagc   436

<210> 11
<211> 481
<212> DNA
<213> Human

<220>
<223> All occurrences of n = any nucleotide

<400> 11
ggaggtcgct gcagctccgc gggtgagaga tgggggcggt ttggacccgg gaggtggtag 60

cgcccgtggg gagaagtggc tggatctggg cagcctttgg cagggcctgg ctctggccgc 120

cgggtctggg tgtcccctct catcctgtct gtccctgca gatccatgaa gctaatgtac 180

aaggagtcag gggtgtttga aggcatcccc acctatcgct tcgtggctcc caaaaccctg 240

tttgccaacg ggtccatcta cccacccaac gaaggcttct gcccgtgcct ggagtctgga 300

attcagaacg tcagcagctg caggttcagt acgtgccgtc ccctgttctg ggatngccgg 360

agggtgttag gtntngggca cctnanggtt tatctgccca atgctgtctg cttaatctct 420

ggcctctgta ctcttgataa cccattaagc caaaaatatg atgcctctgg gacgatatct 480

g   481

<210> 12
<211> 430
<212> DNA
<213> Human

<400> 12
tggggctttt tacagaatgg aggaagggat cctctctgtc gggtattatg gtcatcgcca 60

cggggtgcc gtgcagacca cagctctgtg cagacttccg gagtggcagg acgtgccaat 120

atactgtcgt tgtatgatgt cccctccctg cccttgttgt aggtgcccc ttgtttctct 180

cccatcctca cttcatcaac gccgacccgg ttctggcaga agcggtgact ggcctgcacc 240

ctaaccagga ggcacactcc ttgttcgtgg acatccaccc ggtgagcccc tgccatcctc 300

tgtggggggt gggtgattcc tggttggagc acacctggct gcctcctctc tccccaggca 360

gagagctgct gtgggctggg gtggtgggaa gcctggcttc tagaatctcg agccaccaaa 420

gttccttact   430

<210> 13
<211> 390
<212> DNA
<213> Human

<220>
<223> All occurrences of n = any nucleotide

<400> 13
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gacgcccacc ctcttgactg ggaccaggga aaagaaggtt gactgtgtcc ctggagcttg 120

ggggtggcca gtctcctcac tgtgtttgtt gccgcaggtc acgggaatcc ccatgaactg 180

ctctgtgaaa ctgcagctga gcctctacat gaaatctgtc gcaggcattg ggtgagtggg 240

gactgggaac tggggctgca ttgctcattg agagattang tgctcagtgc tccagtgttc 300

ccagactccc ctgacatacc ccaggaaaca gggcatgggg aagggagagg gtcctattgg 360

gggtggaatc cagtccctgc tgatcttctc   390

<210> 14
<211> 370
<212> DNA
<213> Human

<400> 14
atggctccta aagtgtttca gctcattgtt tatatttggt ggtgagggtt tagtgtgtgc 60

aaaattatac taaacctgtt tagatgttgt attcaagcag aattagatca agtttgggtg 120

taagactttg ttccaacacc tatgtcttgc ttatttccag acaaactggg aagattgagc 180

ctgtggtcct gccgctgctc tggttttgcag aggtaagggt gcgttgggca cagcgtcggg 240

ggcttttgtt aatagccaat gtgggcattt gaggcaggag gcgggggggag caccttgtag 300

aaagggagag ggctgagcca gggtaaccgg actgttacat ggaccagcgt atcatacact 360

tcaccctgtc 370

<210> 15
<211> 470
<212> DNA
<213> Human

<400> 15
cctggaggga ggaggtccct ggcaggctcc aacacatgct ttagccggga agcttgaggt 60

ggggaaaagc tgaggcgggc acagaggaag gtgttgggtg gcatctgcgc tgtagcccgc 120

agcctgcggc cccagctcat gtgtttgtca ttctgtctcc tcagagcggg gccatggagg 180

gggagactct tcacacattc tacactcagc tggtgttgat gcccaaggtg.atgcactatg 240

cccagtacgt cctcctggcg ctgggctgcg tcctgctgct ggtccctgtc atctgccaaa 300

tccggagcca agtaggtgct ggccagaggg cagcccgggc tgacagccat tcgcttgcct 360

gctgggggaa aggggcctca gatcggaccc tctggccaac cgcagcctgg agcccacctc 420

cagcagcagt cctgcgtctc tgccggagtg ggagcggtca ctgctggggg 470

<210> 16
<211> 450
<212> DNA
<213> Human

<400> 16
ccccacatct cagccacctg caatcgttga gggttgttgg actctaaact tatgtgcctt 60

tcctgtttcc tctttgcctt ttgcaaattg aagaaccgtg taaaaccatt tttatgtggc 120

ttcaacgtca actataaatt agcttggtta tcttctagga gaaatgctat ttattttgga 180

gtagtagtaa aaagggctca aaggataagg aggccattca ggcctattct gaatccctga 240

tgacatcagc tcccaagggc tctgtgctgc aggaagcaaa actgtaggtg ggtaccaggt 300

aatgccgtgc gcctccccgc cccctcccat atcaagtaga atgctggcgg cttaaaacat 360

ttggggtcct gctcattcct tcagcctcaa cttcacctgg agtgtctaca gactgaagat 420

gcatatttgt gtattttgct tttggagaaa 450

<210> 17
<211> 544
<212> DNA
<213> Human

<400> 17
actgcggaga tgagggtcta gaaggtggtg gcggggcatg tggaccgttg taagggctct 60

ggggttcctg ggtgggctgg cgaagtccta ctcacagtga ccaaccatga tgatggtccc 120

gatagaggag gagagggagg aggagggaaa aggaagggtg aggggctcag aggggagagc 180

tgggaggagg ggagacatag gtgggggaag gggtaggaga aaggggaagg gagcaagagg 240

gtgaggggca ccaggcccca tagacgtttt ggctcagcgg ccacgaggct tcatcagctc 300

ccgccccaaa acggaagcga ggccgtgggg gcagcggcag catggcgggg cttgtcttgg 360

cggccatggc cccgccccct gcccgtccga tcagcgcccc gccccgtccc cgccccgacc 420

ccgccccggg cccgctcagg ccccgcccct gccgccggaa tcctgaagcc caaggctgcc 480

cggggcggt ccggcggcgc cggcgatggg gcataaaacc actggccacc tgccgggctg 540

ctcc   544

<210> 18
<211> 190
<212> DNA
<213> Human

<400> 18
gtgggtgagg gagaccccag ggggtccgcg cacggacccg ggctgttggg cgctgggcgc 60

cgggaggacc cgcgcgttgc ggtgggtggg cgaccgcagc ggaatcggcg cccgggcctg 120

gcgccgcaga acacgaggga ggccaggcgc ttcgggaggg gctgctgccc gcctccccac 180

caccctcacc   190

<210> 19
<211> 159
<212> DNA
<213> Human

<400> 19
agcctcatgt gcgaagggct ttcccaccac ctcctatccc aagctcccgc cgaggagccc 60

cttccctggc cgggctcggg cagctgttcc ggagccttgt ggtggggcgt ggggccctca 120

tcactctcct cacaagcgta cttgtccctt cccctgcag   159

<210> 20
<211> 162

```
<212> DNA
<213> Human

<400> 20
gtgaggctgt gtccacgtga tggtggacgg gccggctgac gctgggcatg ggacgggtct 60

caagtggacg ggatggggag gctgctgact gaccccaaa cattgttccg gaagcacgca 120

actcatagtc ggggtaagtg ctactcccaa aaaagtttgc gt                     162


<210> 21
<211> 191
<212> DNA
<213> Human

<400> 21
catgtcctgc agtgggcagg cagcgggagg gacagacttg gcgaaggggc cgagctcagc 60

tttggctgtg gggccggagg tgtgcacaga cgtccagggc ccctggttcc caggcaggca 120

ttgcaggcga gtagaaggga aacgtcccat gcagcggggc ggggcgtctg acccactggc 180

ttcccccaca g                                                       191


<210> 22
<211> 162
<212> DNA
<213> Human

<400> 22
gtgaggctgc cctgtggccc acgccgcctc gcaccctgac ctcgtcccct gtctctcctc 60

ccgcctgccc cttgtgcaga gagcagtccc tgaggtggtc ggagcgtggg gactcacgcc 120

tggtgggtgg ctttcggccc tgtgctgtct ccaccacccc ca                     162


<210> 23
<211> 161
<212> DNA
<213> Human

<400> 23
ggtggttctg gtgtcccaga tgccccacgt ggccactcca ggggcctcct gcaccccagc 60

atttcccttc atgggctctt tgctgtgagg cccagctggg gccaagggag gatgggccag 120

ccacgtccag cctctgacac tagtgtccct tcgccttgca g                      161


<210> 24
<211> 162
<212> DNA
<213> Human
```

<400> 24

gtacgtgtgg cctggtgaga agccaaagat tcaggcctgt gtcctgtctt cccctcacac 60

agcctggaca ctggtcacca gcttgctttg tagctggctg gggatctagt ggctgtgggt 120

tgtaagtgac tgagaacctg actcaaaccg gcttgagtga aa 162

<210> 25
<211> 160
<212> DNA
<213> Human

<400> 25

cctctcggtc cccagacact gggcatttgg cagtgaacca gatgctgggg gccctgtcct 60

tctggtggag ggggaggagg gctcagccca gaatgttcag accaggccgg ctcaatggca 120

ggcctaagcc ttacgatgct gttccctgct gtgtctgtag 160

<210> 26
<211> 160
<212> DNA
<213> Human

<400> 26

gtgaggggcg agaggcgagg gccctgtcg ccagggagag gggagggtgg gcccggccat 60

ggctgctcgg gagtggcagg gaccagagag ctccttcttc ctttgtcgtg aagagggtgc 120

tgggaggatg aacactcttg aagttggagg agggatttta 160

<210> 27
<211> 160
<212> DNA
<213> Human

<400> 27

tctctgtgtg tctacatagc ctgccctctt cccaccgtgc cagtattggg aattgagtgg 60

ccgtgcgtgc accagggtga gttaggtgtg cagcacctga gagggcttat taaggggcct 120

tggccctact gaggggtcta gtctggatgc ttcccccag 160

<210> 28
<211> 160
<212> DNA
<213> Human

<400> 28

gtaatcactg ggactcgggg cctcctgggt ttcctgggta gctcatggcc aaattctgtg 60

gtgttggctg tgcacttgga aagcattttg actcatcgtg gatttgactc agtagccctt 120

```
ggcaccagct tgaattctct ttggtcacac caccaaaagc                      160
```

```
<210> 29
<211> 161
<212> DNA
<213> Human
```

```
<400> 29
ggaggtcgct gcagctccgc gggtgagaga tgggggcggt ttggacccgg gaggtggtag 60

cgcccgtggg gagaagtggc tggatctggg cagcctttgg cagggcctgg ctctggccgc 120

cgggtctggg tgtcccctct catcctgtct gtcccctgca g                      161
```

```
<210> 30
<211> 153
<212> DNA
<213> Human
```

```
<220>
<223> All occurrences of n = any nucleotide
```

```
<400> 30
gtacgtgccg tcccctgttc tgggatngcc ggagggtgtt aggtntnggg cacctnangg 60

tttatctgcc caatgctgtc tgcttaatct ctggcctctg tactcttgat aacccattaa 120

gccaaaaata tgatgcctct gggacgatat ctg                              153
```

```
<210> 31
<211> 162
<212> DNA
<213> Human
```

```
<400> 31
tggggctttt tacagaatgg aggaagggat cctctctgtc gggtattatg gtcatcgcca 60

cggggggtgcc gtgcagacca cagctctgtg cagacttccg gagtggcagg acgtgccaat 120

atactgtcgt tgtatgatgt cccctccctg cccttgttgt ag                    162
```

```
<210> 32
<211> 149
<212> DNA
<213> Human
```

```
<400> 32
gtgagcccct gccatcctct gtggggggtg ggtgattcct ggttggagca cacctggctg 60

cctcctctct ccccaggcag agagctgctg tgggctgggg tggtgggaag cctggcttct 120

agaatctcga gccaccaaag ttccttact                                   149
```

<210> 33
<211> 157
<212> DNA
<213> Human

<400> 33
ccccagcctg tggcttgttt taggtaagat acaagcaagc tccactgggc agttagctgg 60

gacgcccacc ctcttgactg ggaccaggga aaagaaggtt gactgtgtcc ctggagcttg 120

ggggtggcca gtctcctcac tgtgtttgtt gccgcag 157

<210> 34
<211> 159
<212> DNA
<213> Human

<220>
<223> All occurrences of n = any nucleotide

<400> 34
gtgagtgggg actgggaact ggggctgcat tgctcattga gagattangt gctcagtgct 60

ccagtgttcc cagactcccc tgacataccc caggaaacag ggcatgggga agggagaggg 120

tcctattggg ggtggaatcc agtccctgct gatcttctc 159

<210> 35
<211> 160
<212> DNA
<213> Human

<400> 35
atggctccta aagtgtttca gctcattgtt tatatttggt ggtgagggtt tagtgtgtgc 60

aaaattatac taaacctgtt tagatgttgt attcaagcag aattagatca gtttgggtg 120

taagactttg ttccaacacc tatgtcttgc ttatttccag 160

<210> 36
<211> 158
<212> DNA
<213> Human

<400> 36
gtaagggtgc gttgggcaca gcgtcggggg cttttgttaa tagccaatgt gggcatttga 60

ggcaggaggc gggggagca ccttgtagaa agggagaggg ctgagccagg gtaaccggac 120

tgttacatgg accagcgtat catacacttc accctgtc 158

<210> 37

<211> 164
<212> DNA
<213> Human

<400> 37
cctggaggga ggaggtccct ggcaggctcc aacacatgct ttagccggga agcttgaggt 60

ggggaaaagc tgaggcgggc acagaggaag gtgttgggtg gcatctgcgc tgtagcccgc 120

agcctgcggc cccagctcat gtgtttgtca ttctgtctcc tcag 164

<210> 38
<211> 159
<212> DNA
<213> Human

<400> 38
gtaggtgctg gccagagggc agcccgggct gacagccatt cgcttgcctg ctgggggaaa 60

ggggcctcag atcggaccct ctggccaacc gcagcctgga gcccacctcc agcagcagtc 120

ctgcgtctct gccggagtgg gagcggtcac tgctggggg 159

<210> 39
<211> 158
<212> DNA
<213> Human

<400> 39
ccccacatct cagccacctg caatcgttga gggttgttgg actctaaact tatgtgcctt 60

tcctgtttcc tctttgcctt ttgcaaattg aagaaccgtg taaaaccatt tttatgtggc 120

ttcaacgtca actataaatt agcttggtta tcttctag 158

<210> 40
<211> 163
<212> DNA
<213> Human

<400> 40
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cggcttaaaa catttggggt cctgctcatt ccttcagcct caacttcacc tggagtgtct 120

acagactgaa gatgcatatt tgtgtatttt gcttttggag aaa 163

<210> 41
<211> 23
<212> DNA
<213> Human

<400> 41

cccctgccgc cggaatcctg aag   23

<210> 42
<211> 24
<212> DNA
<213> Human

<400> 42
cgctttggcg gagcagccca tgtc   24

<210> 43
<211> 24
<212> DNA
<213> Human

<400> 43
tggggccctc atcactctcc tcac   24

<210> 44
<211> 23
<212> DNA
<213> Human

<400> 44
gcagcctccc catcccgtcc act   23

<210> 45
<211> 18
<212> DNA
<213> Human

<400> 45
attgcaggcg agtagaag   18

<210> 46
<211> 18
<212> DNA
<213> Human

<400> 46
caggcgggag gagagaca   18

<210> 47
<211> 20
<212> DNA
<213> Human

<400> 47
tgggctcttt gctgtgaggc   20

```
<210> 48
<211> 20
<212> DNA
<213> Human

<400> 48
ccaggctgtg tgaggggaag                                              20


<210> 49
<211> 20
<212> DNA
<213> Human

<400> 49
gcccagaatg ttcagaccag                                              20


<210> 50
<211> 20
<212> DNA
<213> Human

<400> 50
gcaccctctt cacgacaaag                                              20


<210> 51
<211> 19
<212> DNA
<213> Human

<400> 51
cacctgagag ggcttatta                                               19


<210> 52
<211> 19
<212> DNA
<213> Human

<400> 52
caaaatgctt tccaagtgc                                               19


<210> 53
<211> 20
<212> DNA
<213> Human

<400> 53
gccgccgggt ctgggtgtcc                                              20


<210> 54
<211> 23
<212> DNA
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<213> Human

<400> 54
cagaggccag agattaagca gac   23

<210> 55
<211> 20
<212> DNA
<213> Human

<400> 55
ttgtatgatg tcccctccct   20

<210> 56
<211> 20
<212> DNA
<213> Human

<400> 56
ttcccaccac cccagcccac   20

<210> 57
<211> 20
<212> DNA
<213> Human

<400> 57
ggttgactgt gtccctggag   20

<210> 58
<211> 21
<212> DNA
<213> Human

<400> 58
gggaacactg gagcactgag c   21

<210> 59
<211> 20
<212> DNA
<213> Human

<400> 59
ggtggtgagg gtttagtgtg   20

<210> 60
<211> 20
<212> DNA
<213> Human

<400> 60

ctcccccccgc ctcctgcctc   20

<210> 61
<211> 20
<212> DNA
<213> Human

<400> 61
aaggtgttgg gtggcatctg   20

<210> 62
<211> 20
<212> DNA
<213> Human

<400> 62
ggctccaggc tgcggttggc   20

<210> 63
<211> 19
<212> DNA
<213> Human

<400> 63
ttgaagaacc gtgtaaaac   19

<210> 64
<211> 18
<212> DNA
<213> Human

<400> 64
ttgaggctga aggaatga   18

<210> 65
<211> 430
<212> DNA
<213> Human

<400> 65
tggggctttt tacagaatgg aggaagggat cctctctgtc gggtattatg gtcatcgcca 60

cgggggtgcc gtgcagacca cagctctgtg cagacttccg gagtggcagg acgtgccaat 120

atactgtcgt tgtatgatgt cccctccctg cccttgttgt aggtgccccc ttgtttctct 180

cccatcctca cttcatcaac gctgacccgg ttctggcaga agcggtgact ggcctgcacc 240

ctaaccagga ggcacactcc ttgttcgtgg acatccaccc ggtgagcccc tgccatcctc 300

tgtggggggt gggtgattcc tggttggagc acacctggct gcctcctctc tccccaggca 360

gagagctgct gtgggctggg gtggtgggaa gcctggcttc tagaatctcg agccaccaaa 420

gttccttact   430

<210> 66
<211> 160
<212> DNA
<213> Human

<400> 66
gtgaggggcg agaggcgagg gccctgtcg ccagggagag gggagggtgg gcctggccat 60

ggctgctcgg gagtggcagg gaccagagag ctccttcttc ctttgtcgtg aagagggtgc 120

tgggaggatg aacactcttg aagttggagg aggatttta   160

<210> 67
<211> 20
<212> DNA
<213> Human

<400> 67
aaccgggtca gcgttgagga   20

<210> 68
<211> 31
<212> DNA
<213> Human

<400> 68
tgccagaacc gggtcagcgt tgaggaagtg a   31

<210> 69
<211> 20
<212> DNA
<213> Human

<400> 69
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<210> 72
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tgccagaacc gggtcggcgt tgatgaagtg a   31

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aggggagggt gggcctggcc atggctgctc g                               31


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caggaaacag ctatgacc   18

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cgcccagcac agcgcacagt agc   23

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<210> 92
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<400> 92
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caccacccca gcccacagca gc   22

<210> 95
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ggggttcctg ggtgggctgg cgaagtccta ctcacagtga ccaaccatga tgatggtccc 120

gatagaggag gagagggagg aggagggaaa aggaagggtg aggggctcag aggggagagc 180

tgggaggagg ggagacatag gtgggggaag gggtaggaga aaggggaagg gagcaagagg 240

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gtgaggggca ccaggcccca tagacgtttt ggctcagcgg ccacgaggct tcatcagctc 300

ccgccccaaa acggaagcga ggccgtgggg gcagcggcag catggcgggg cttgtcttgg 360

cggccatggc cccgcccct gcccgtccga tcagcgcccc gccccgtccc cgccccgacc 420

ccgccccggg cccgctcagg ccccgcccct gccgccggaa tcctgaagcc caaggctgcc 480

cggggcggt ccggcggcgc cggcgatggg gcataaaacc actggccacc tgccgggctg 540

ctcctgcgtg cgctgccgtc ccggatccac cgtgcctctg cggcctgcgt gccccgagtc 600

cccgcctgtg tcgtctctgt cgccgtcccc gtctcctgcc aggcgcggag ccctgcgagc 660

cgcgggtggg ccccaggcgc gcagacatga gctgctccgc caaagcgcgc tgggctgccg 720

gggcgctggg cgtcgcgggg ctactgtgcg ctgtgctggg cgctgtcatg atcgtgatgg 780

tgccgtcgct catcaagcag caggtcctta aggtgggtga gggagacccc aggggtccg 840

cgcacggacc cgggctgttg ggcgctgggc gccgggagga cccgcgcgtt gcggtgggtg 900

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ttgcaggcga gtagaaggga aacgtcccat gcagcggggc ggggcgtctg acccactggc 180

ttcccccaca gggagttcag gcacaaaagc aacatcacct tcaacaacaa cgacaccgtg 240

tccttcctcg agtaccgcac cttccagttc cagccctcca agtcccacgg ctcggagagc 300

gactacatca tcatgcccaa catcctggtc ttggtgaggc tgccctgtgg cccacgccgc 360

ctcgcaccct gacctcgtcc cctgtctctc ctcccgcctg ccccttgtgc agagagcagt 420

ccctgaggtg gtcggagcgt ggggactcac gcctggtggg tggctttcgg ccctgtgctg 480

tctccaccac cccca                                        495


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agcgtgcggc cccagctcat gtgtttgtca ttctgtctcc tcagagcggg gccatggagg 180

gggagactct tcacacattc tacactcagc tggtgttgat gcccaaggtg atgcactatg 240

cccagtacgt cctcctggcg ctgggctgcg tcctgctgct ggtccctgtc atctgccaaa 300

tccggagcca agtaggtgct ggccagaggg cagcccgggc tgacagccat tcgcttgcct 360

gctgggggaa aggggcctca gatcggaccc tctggccaac cgcagcctgg agcccacctc 420

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ctttcgcgga gcagctcatg tctgcgcgcc t   31

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cgcagacatg agctgctccg c   21

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aggcgcgcag acatgagctg ctccgccaaa g   31

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gcggagcagc gcatgtctgc g   21

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cgcagacatg cgctgctccg c   21

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ttgggcatga tgatgtagac g   21

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gagagcgact acatcatcat gcccaacatc c

31

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ttgggcatga ggatgtagac g

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<400> 111
ggatgttggg catgaggatg tagacgctct c

31

<210> 112
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cgactacatc ctcatgccca a

21

<210> 113
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<400> 113
gagagcgact acatccatca tgcccaacat cc

32

<210> 114
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<400> 114
tggggccgca cgctgcgggc t

21

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<400> 115
tgagctggggg ccgcacgctg cgggctacag c                               31


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<210> 117
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gctgtagccc gcagcgtgcg gccccagctc a                               31


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<400> 118
tggggccgca ggctgcgggc t                                          21


<210> 119
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tgagctggggg ccgcaggctg cgggctacag c                               31


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<400> 120
agcccgcagc ctgcggcccc a                                          21


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